Preventing Scratches When Developing X-Ray Film

(Answer = Tank Development)

When I first began experimenting with the use of X-ray film in a large format camera, I was warned by others that this type of films scratches very easily. So with this advice in mind, I began to work with X-ray films.

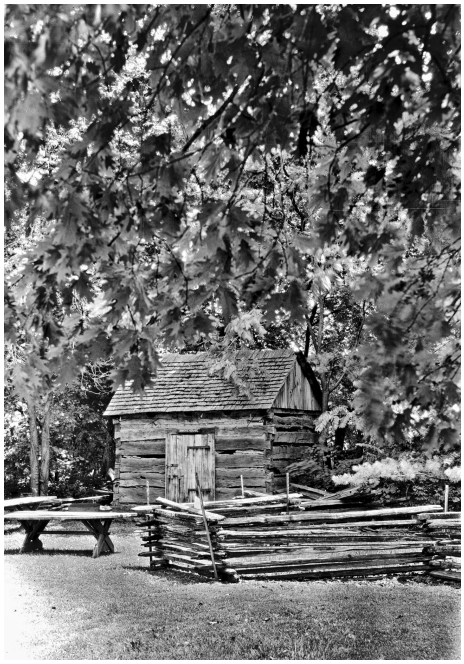
I first did tray development (*regular plastic trays*) however, these are not very good for development of the X-ray negatives as when agitating the negatives, they received scratches on the emulsion. So I used a 9"X11" glass baking “dish”. This helped to minimum the scratches, somewhat. This development by inspection was very time consuming, there had to be another way. I reformulated a developer named ***“Ansco-30"***. I had to do this as the original formula was way too fast. I needed at least 5 to 10 minutes for tank development of 12 negative in total. I did succeed in the reformulation to achieve 5 to 8 minutes in “*day-tank*” development. And I found out that with careful handling of the film the scratches were all but gone. (If you drop a negative on the floor not only will it become scratched, but will pickup dirt and or dust.) Also - X-ray film in the dry state is rather resultant. Only when wet is the gelatine sanative to abrasions. So I added some Alum to the fixer to harden the developed emulsion before hanging on the “dry-line”.

I have developed films of 3.25X4.25 // 4X5" in a Yankee tank, and 5X7" in a “Cesco-Lite” one gallon tank. Also - 120, 220, 35mm (828), 116, and 122 “re-rolled” roll films onto spools with and without backing paper, in a Patterson tank. All without noticeable scratches. I did the 5X7" negatives in an open top “Cesco-Lite” tank with the RED safelite on in the darkroom.

^^*Shown Above is the “Cesco-Lite” Tank / With the 12 negatives carriers.*^^

(*I have written about my development in past articles, so I will not repeat that here. As well as my formula for the “Ansco-30/JK” X-Ray Developer, and the Re-Rolling process I did with roll films.*)

Above is how I hang the negatives on the “Dry-Line”. I remove the carriers from the tank, and hang to dry. After about 30 minutes, I carefully remove the negatives from the carriers and put the negative on “spring clothes pins” to dry totally. (This take about another hour to completely dry.) It is a good idea to not handle the negatives very much until they are completely dry.



Above are two Positive Examples = Scanned Negatives

Thank you for reading.

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